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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/764,592

01/23/2004

Donald A. Blackwell

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EXAMINER

CHANDRAN, BIJU INDIRA

ART UNIT

PAPER NUMBER

2835

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	10/764,592	BLACKWELL, DONALD A.	
	Examiner	Art Unit	
	Biju Chandran	2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/19/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 10 objected to because of the following informalities: The claim recites "hot swappable power connectors", which is interpreted to mean power connectors that can be hot-swapped (based upon the usage in claim 21). The specification recites "hot-swap connectors 108" (page 12, middle of the page), which is interpreted to mean a connector that permits components connected to it to be hot-swapped (based upon the description in the specification). The examiner has interpreted the "hot swappable power connectors" in claim 10 to mean "connectors that permit power supplied connected to them to be hot-swapped".. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

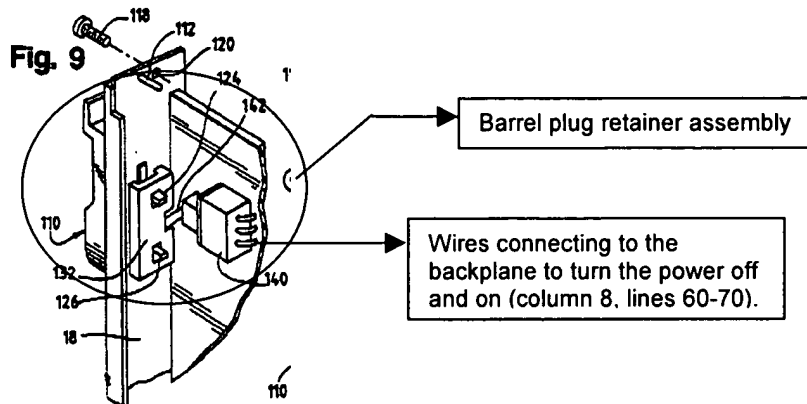
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 6-11, and 14-18, 20-23, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy et al.(US Patent 5,638,259) in view of Hutson et al. (US Patent 6,091,609).

- Regarding claim 1, McCarthy et al. disclose a housing (10) for receiving any type of module including network tap modules (column 5, lines 6-7) comprising: a chassis for receiving a plurality of hot-pluggable network tap modules; and a power supply (18A) for providing power to the modules. McCarthy does not explicitly say that the modules are hot-pluggable, and the power supply supplies power to connectors. Hutson et al. disclose a housing (102) in which the modules are hot-pluggable (column 4, lines 40-50), and having a power supply (201) that supplies power to a plurality of power supply connectors (column 6, lines 64-65), wherein each power supply connector (303) is capable of providing power to a received hot-pluggable network tap module. At the time the invention was made, it would have been obvious to one of ordinary skill in that art to incorporate the hot-pluggable modules and power supply connectors as taught by Hutson et al., in the housing as disclosed by McCarthy et al., to ensure that the system does not have to be shut-down for replacing defective modules, and to provide protection against arcing and current spikes that may damage the system (Hutson et al., column 2, lines (61-67)).
- Regarding claim 6, McCarthy et al. further disclose that the housing is configured for receiving 11 modules, but allows for additional modules including 12 hot-pluggable network tap modules (column 5, lines 3-5).

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- Regarding claim 7, McCarthy et al. further disclose that the chassis comprises at least one cooling fan (shown in figure 2 and described in column 5, line 12) or other means of cooling.
- Regarding claim 8, McCarthy et al. further disclose that the housing includes a backplane printed circuit board (38).
- Regarding claim 9, McCarthy does not disclose that the back plane has a backwards L-shape. Hutson et al. disclose a back-plane printed circuit board assembly that is configured to have a backwards L-shape ('220' and '221', figures 3A-4B). At the time of the invention it would have been obvious to one of ordinary skill in the art to incorporate the L-shapes back plane assembly as taught by Hutson et al., in the housing as disclosed by McCarthy et al. to enable hot-swapping the backplanes (Hutson et al., column 7, lines 15-20).
- Regarding claim 10, the housing as disclosed by McCarthy et al, and modified by Hutson et al. disclose all the limitations of claim 8. McCarthy et al. further disclose that the backplane printed circuit board assembly includes a plurality of power connectors that enable hot-swapping (303, 403).
- Regarding claim 11, McCarthy et al. further disclose that the backplane printed circuit board assembly (220, 221, and 222) includes connectors (305, 306, 405, 406, etc.) for connecting to the DC output of the power supply (column 6, line 19-21).



- Regarding claim 14, the housing as disclosed by McCarthy et al, and modified by Hutson et al. disclose all the limitations recited in claim 1. McCarthy further discloses a barrel plug retainer assembly (110) that includes a barrel plug retainer (140) and a plurality of barrel plugs (142) used to provide power to the hot-pluggable network tap modules (column 3, lines 40-50; column 8, lines 30-45, 60-70).
- Regarding claim 15, McCarthy further discloses that the barrel plug retainer assembly further includes a plurality of guide pins ('124', '126'; column).
- Regarding claim 16, McCarthy does not explicitly disclose that the retainer is a machined plastic part. It would have to obvious to one of ordinary skill in the art, at the time of the invention, to make the part out of plastic or any other suitable material, and to produce it by machining or any other suitable process, to decrease the cost of the part. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re*

Leshkin, 125 USPQ 416. With regard to the limitation of 'machined' part, even though the claim is limited by and defined by the recited process, the determination of patentability of the product is based upon the product itself, and does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985).

- Regarding claim 17, the housing disclosed by McCarthy et al. as modified by Hutson et al. further disclose a power distribution printed circuit board assembly ('220', '221', and '222' in Hutson et al.) attached to the barrel plug retainer assembly ('110' in McCarthy et al. Marked in attached figure).
- Regarding claim 18, the housing disclosed by McCarthy et al. as modified by Hutson et al. further disclose a DC wiring harness connected to the power distribution printed circuit board assembly, which DC wiring harness includes power wires (marked in attached figure) for providing DC power to the barrel plugs (column 5, lines 58-61).
- Regarding claim 20, the housing disclosed by McCarthy et al. as modified by Hutson et al. disclose all the limitations recited in claim 1. McCarthy et al. do not disclose a dual redundant power supply.

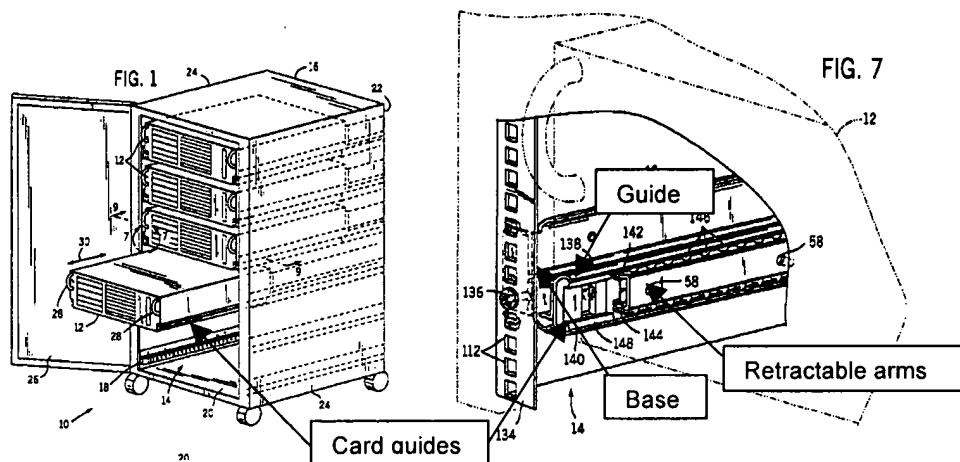
Hutson et al. disclose a power supply that is dual redundant (201, 202). At the time the invention was made it would have been obvious to one of ordinary skill in the art to incorporate the dual redundant power supply as taught by Hutson et al., in the housing as disclosed by McCarthy et al., to provide uninterrupted power supply to the system in the event of malfunction of one of the power supplies.

- Regarding claim 21, Hutson et al. further disclose that the power supply is hot-swappable (column 4, lines 40-50).
- Regarding claim 22, Hutson et al. further disclose that the power supply includes cooling fans or other means of cooling (see figure 2A).
- Regarding claim 23, McCarthy et al. disclose a housing (10) for receiving any type of module including network tap modules (column 5, lines 6-7) comprising: a chassis for receiving a plurality of hot-pluggable network tap modules; a first power supply (18A) for providing power to the modules. McCarthy et al. do not explicitly disclose that the modules are hot-pluggable, the power supply supplies power to connectors, and a second redundant power supply. Hutson et al. disclose a housing (102) in which the modules are hot-pluggable (column 4, lines 40-50), having a first power supply (201) that supplies power to a plurality of power supply connectors (column 6, lines 64-65), wherein each power supply connector (303) is capable of providing power to a received hot-pluggable network tap module.

Hutson et al. also disclose a second redundant power supply (202) for providing power to a plurality of power supply connectors (column 6, lines 64-65) in the event of failure of the first power supply (column 10, lines 48-59). At the time the invention was made, it would have been obvious to one of ordinary skill in that art to incorporate the hot-pluggable modules, the power supply connectors, and the second redundant power supply as taught by Hutson et al., in the housing as disclosed by McCarthy et al., to ensure that the system does not have to be shut-down for replacing defective modules, to provide protection against arcing and current spikes that may damage the system (Hutson et al., column 2, lines (61-67), and to provide operational capability in the event of failure of one of the power supplies, respectively.

- Regarding claim 27, the housing as disclosed by McCarthy et al. and modified by Hutson et al. as mentioned above, satisfies all the limitations of claim 23, and further disclose that the first power supply is hot-swappable such that the first power supply can be replaced in the event of failure thereof without powering down any of the plurality of hot-pluggable network tap modules (column 4, lines 43-46).

3. Claims 2-5 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy et al. in view of Hutson et al. and further in view of Varghese et al. (PGPub US 2001/0037985 A1).



- Regarding claim 2, McCarthy et al. as modified by Hutson et al. discloses all the limitations of claim 1. McCarthy further discloses a plurality of card guides (column 2, lines 59-64, shown in figure 2). McCarthy does not disclose displaceable card guides. Varghese et al. disclose a housing for electronic components comprising a plurality of displaceable card guides, which are capable of assuming extended or retracted positions. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to replace the guides disclosed by McCarthy et al. with the displaceable guides disclosed by Varghese et al. to enable easy and damage free (McCarthy et al.,

column 3, lines 20-30) insertion and extraction of the modules into the housing.

- Regarding claim 3, Varghese et al. further disclose that the displaceable card guides each comprise a base, two retractable arms, and a guide (see labeling in attached figure, and figure 4, see also paragraph 0010).
- Regarding claim 4, Varghese et al. further disclose that the displaceable card guides default to an extended position.
- Regarding claim 5, McCarthy et al., as modified by Hutson et al. and Varghese et al. as applied in claim 2, further discloses that the base of each displacement guide is attached to the roof of the chassis (figure 3, column 5, lines 44-48).
- Regarding claim 28, McCarthy et al. disclose a housing (10) for receiving any type of module including network tap modules (column 5, lines 6-7) comprising: a chassis for receiving a plurality of network tap modules; and a power supply (18A) for providing power to the modules through a barrel plug retainer assembly (11) that is associated with the chassis (see figure 9) and interfaces with a plurality of barrel plugs (142) used to provide power to the network tap modules (column 3, lines 40-50; column 8, lines 30-45, 60-70). McCarthy further discloses a plurality of card guides (column 2, lines 59-64, shown in figure 2). McCarthy et al. do not explicitly say that the modules are hot-

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pluggable, the power supply supplies power to connectors, and does not disclose displacement card guides that are capable of assuming extended positions. Hutson et al. disclose a housing (102) in which the modules are hot-pluggable (column 4, lines 40-50), and having a power supply (201) that supplies power to a plurality of power supply connectors (column 6, lines 64-65), wherein each power supply connector (303) is capable of providing power to a received hot-pluggable network tap module. At the time the invention was made, it would have been obvious to one of ordinary skill in that art to incorporate the hot-pluggable modules and power supply connectors as taught by Hutson et al., in the housing as disclosed by McCarthy et al., to ensure that the system does not have to be shut-down for replacing defective modules, and to provide protection against arcing and current spikes that may damage the system (Hutson et al., column 2, lines (61-67)). Varghese et al. disclose a housing for electronic components comprising a plurality of displaceable card guides, which are capable of assuming extended or retracted positions. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to replace the guides disclosed by McCarthy et al. with the displaceable guides disclosed by Varghese et al. to enable easy and damage free (McCarthy et al., column 3, lines 20-30) insertion and extraction of the modules into the housing.

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy et al. in view of Hutson et al. and further in view of Young et al. (US Patent 6,018,456). McCarthy et al. as modified by Hutson et al. discloses all the limitations of claim 8, but does not disclose that the backplane includes fan connectors. Young et al. disclose an electronic component housing with a backplane printed circuit board assembly including a fan connector ('39a'; column 6, lines 10-13). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate the printed circuit board fan connector as taught by Young et al., in the housing disclosed by McCarthy et al. and modified by Hutson et al. to easily replace the fan in the field.
5. Claims 13, and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy et al. in view of Hutson et al. and further in view of Bresniker et al. (PG Pubs US2003/0084359 A1).
 - Regarding claim 13, McCarthy et al. as modified by Hutson et al. discloses all the limitations of claim 8, but does not disclose that the backplane includes status signals. Bresniker et al. discloses a housing for electronic components wherein the backplane printed circuit board includes status signals (paragraph 0035). At the time the invention was made, it would have been obvious to one of ordinary skill in the art

to incorporate the backplane status signal as taught by Bresniker et al. in the housing as taught by McCarthy et al. and modified by Hutson et al., to monitor the status and to actively control the cooling and power delivery systems in the housing.

- Regarding claim 24, McCarthy et al. as modified by Hutson et al. discloses all the limitations of claim 23, but does not disclose a status indicator. Bresniker et al. discloses a housing for electronic components comprising a status indicator (322) that visually indicates the status of at least one of the modules contained within it (paragraph 0033). At the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate the visual status indicator as taught by Bresniker et al., in the housing for hot-pluggable network tap modules as disclosed by McCarthy et al. and modified by Hutson et al., to visually alert people when the existing conditions within the housing needs attention.
- Regarding claim 25, McCarthy et al. as modified by Hutson et al. discloses all the limitations of claim 23, but does not disclose remote monitoring capability. Bresniker et al. discloses a housing for electronic components comprising a monitoring port (532) that enables the status of at least one of the plurality of modules contained within it to be monitored remotely (paragraphs 0042, 0036, 0034). At the time of the invention, it would have been obvious to one of ordinary skill in

the art to incorporate the remote monitoring capability taught by Bresniker et al. in the housing for hot-pluggable network taps as disclosed by McCarthy et al. and modified by Hutson et al. to enable efficient monitoring of banks of such systems by a single person.

- Regarding claim 26, Bresniker et al. further discloses that the status is associated with the condition of the first power supply (paragraph 0045).

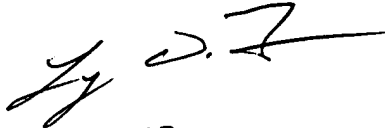
6. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCarthy et al. in view of Hutson et al. and further in view of Garnett et al. (PG Pubs US2003/0084359 A1). McCarthy et al. as modified by Hutson et al. discloses all the limitations of claim 17. Hutson et al. further disclose a power supply system that has AC inputs and DC outputs (column 5, lines 55-60), but does explicitly state that the printed circuit board includes a single connector for both the AC input and DC output. Garnett et al. disclose a backplane connector (connector that plug into '163' in figure 7) that incorporates both AC inputs and DC outputs. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate the backplane connector with AC input and DC output as taught by Garnett et al. in the housing as disclosed by McCarthy et al. and modified by Hutson et al., to decrease the number of distinct piece-parts and improve hot-swapability of the power supply.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Biju Chandran whose telephone number is (571) 272-5953. The examiner can normally be reached on 8AM - 5PM. Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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